

Abstract

A preparation method of a polyamide thin film composite reverse osmosis membrane and a polyamide thin film composite reverse osmosis membrane prepared using the preparation method are provided. The preparation method of a polyamide thin film composite reverse osmosis membrane using interfacial polymerization of an amine aqueous solution and amine-reactive compound includes the steps of (a) forming an active layer through interfacial polymerization by contacting a surface of a porous support with an amine aqueous solution containing a polyfunctional aromatic amine monomer and an organic solution containing polyfunctional acyl halide monomer as an amine-reactive compound, and (b) performing post-treatment preceded by the forming of the active layer by contacting the active layer with an aqueous solution containing 0.1 to 100 wt% of polyfunctional tertiary alcohol amine. The polyamide thin film composite reverse osmosis membrane prepared by using the polyfunctional tertiary alcohol amine as a post-treatment compound has improved water permeability and salt rejection compared to a case of using various post-treatment agents or methods.